

**Table 4: Knee Prosthesis (Replacement) Surgical Site Infection (SSI)
Standardized Infection Ratio (SIR) Tables
January 1, 2008 – November 30, 2008**

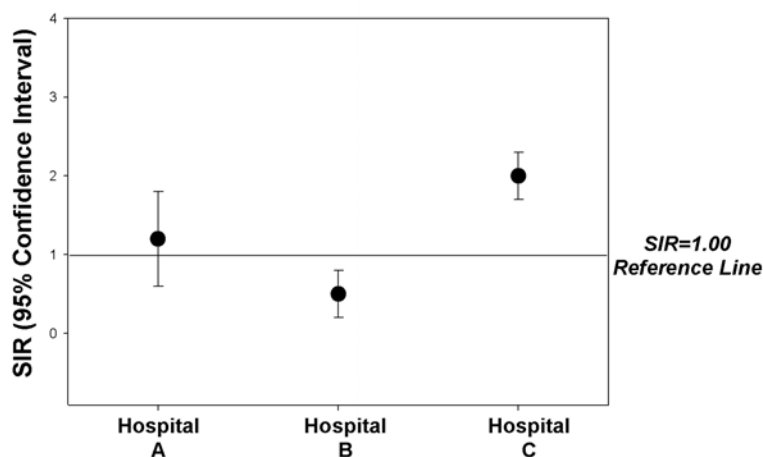
See [Definition of Terms](#) at the [Healthcare Acquired Infections Report](#) website for a more in-depth explanation of Standardized Infection Ratios.

Standardized Infection Ratio: The Standardized Infection Ratio (SIR) is a summary measure used to compare the surgical site infection (SSI) experience among a group of reported procedures to that of a standard population. It is the *observed* number of infections divided by the *expected* number of infections.

For HAI reports, the standard population comes from NHSN data reported from all hospitals using the system. “Expected” *is based on historical data for those procedures at the national level.

Confidence Intervals (CIs)

Because we can never obtain a hospital’s true “population” data (e.g. all patients for all time), we use statistical procedures to “estimate” various measurements using “sample” data. Since estimates have “variability” we use 95% confidence limits (or intervals) to describe the variability around the estimate. The confidence interval (CI) gives us the range within which the TRUE value will fall 95% of the time, assuming that the sample data are reflective of the true population. Below is a graphical example of what CIs would look like if they were in graph form.



Graph Interpretation:

Hospital A: If the 95% confidence interval crosses over the reference line of 1.0, we conclude that the hospital’s infection rate is similar (not significantly different) from “expected” (predicted).

Hospital B: If the 95% confidence interval falls completely below the reference line of 1.0, we conclude that the hospital's infection rate is significantly lower than "expected" (predicted).

Hospital C: If the 95% confidence interval falls completely above the reference line of 1.0, we conclude that the hospital's infection rate is significantly higher than "expected" (predicted).

All conclusions are based on the assumption that the hospital's patient population is similar to the NHSN pooled patient population.

***Please note that the "expected" number of infections does not mean that you expect to get an infection when you go into the hospital for surgery. The goal is for the hospital is to prevent all HAIs.**

Surgical Site Infection (SSI) – Standardized Infection Ratio (SIR)	
Table 4	
Procedure: Knee Prosthesis (Replacement)	

Upstate (Abbeville, Laurens, Oconee, Anderson, Greenwood, Anderson, Spartanburg, Union, Pickens, Greenville, Spartanburg, Cherokee)

<p>Reporting Period: January 1, 2008 – November 30, 2008</p>

Hospital	Observed No. Of SSI	No. of Procedures [*]	Statistically “Expected” No. of SSI [‡]	Comparison to Standard Population SIR = 1 (Observed = “Expected”)			
				Hospital SIR = <u>Observed</u> “Expected”	95% Confidence Interval (CI)		Statistical Interpretation [†]
					Lower	Upper	
Abbeville Area Medical Center	0	18	0.1	0.00	0.00 - 27.21	Not Different	
AnMed Health Medical Center	0	178	1.8	0.00	0.00 - 2.03	Not Different	
Cannon Memorial Hospital	0	24	0.3	0.00	0.00 - 11.74	Not Different	
Greenville Memorial Hospital	3	41	0.5	5.52	1.14 - 16.15	Higher	
Greer Memorial Hospital	0	68	0.8	0.00	0.00 - 4.42	Not Different	
Hillcrest Memorial Hospital	0	70	0.8	0.00	0.00 - 4.91	Not Different	
Laurens County Healthcare System	1	92	1.1	0.94	0.02 - 5.26	Not Different	

Hospital	Observed No. Of SSI	No. of Procedures *	Statistically “Expected” No. of SSI [‡]	Comparison to Standard Population SIR = 1 (Observed = “Expected”)			
				Hospital SIR = Observed “Expected”	95% Confidence Interval (CI)		Statistical Interpretation [†]
					Lower	Upper	
Mary Black Memorial Hospital	1	193	1.9	0.51	0.01	- 2.86	Not Different
Oconee Memorial Hospital	0	179	1.6	0.00	0.00	- 2.32	Not Different
Palmetto Baptist Medical Center - Easley	1	69	0.9	1.08	0.03	- 6.00	Not Different
Patewood Memorial Hospital	9	394	3.6	2.47	1.13	- 4.68	Higher
Self Regional Healthcare	1	300	2.1	0.48	0.01	- 2.69	Not Different
Spartanbu rg Regional Medical Center	4	534	5.7	0.71	0.19	- 1.81	Not Different
St. Francis - Downtown	1	77	0.7	1.34	0.03	- 7.46	Not Different
St. Francis - Eastside	7	851	7.6	0.92	0.37	- 1.90	Not Different
Upstate Carolina Medical Center	1	33	0.3	3.29	0.08	- 18.35	Not Different
Wallace Thomson Hospital	0	9	0.1	0.00	0.00	- 34.80	Not Different

† SC Hospital SIR Statistical Interpretation

- Similar = Statistically similar (not different) than the standard population
- Lower = Statistically lower than the standard population
- Higher = Statistically higher than the standard population

- ‡ Please note that the “expected” number of infections does not mean that you expect to get an infection when you go into the hospital for surgery. The goal is for the hospital is to prevent all HAIs.
- * Too few procedures. Reporting on too few procedures is a risk to patient confidentiality. If five or fewer surgical procedures are performed, the report for the number of infections will be deferred until more procedures are performed.

Surgical Site Infection (SSI) – Standardized Infection Ratio (SIR)
Table 4

Procedure: Knee Prosthesis (Replacement)

Midlands (Newberry, Lexington, Richland, Fairfield, Chester, York, Lancaster, Clarendon, Sumter, Lee, Kershaw, Chesterfield, Darlington, Marlboro, Florence, Marion, Dillon, Newberry, Aiken, Barnwell, Allendale, Bamberg, Orangeburg, Calhoun)

Reporting Period: January 1, 2008 – November 30, 2008

Hospital	Observed No. Of SSI	No. Of Procedures *	Statistically “Expected” No. of SSI [‡]	Comparison to Standard Population SIR = 1 (Observed = “Expected”)			
				Hospital SIR = <u>Observed</u> “Expected”	95% Confidence Interval (CI)		Statistical Interpretation [†]
					Lower	Upper	
Aiken Regional Medical Center	1	86	0.9	1.14	0.03	- 6.34	Not Different
Carolina Pines Regional Medical Center	0	30	0.3	0.00	0.00	- 11.04	Not Different
Carolinas Hospital System	2	148	1.5	1.32	0.16	- 4.76	Not Different
Chester Regional Medical Center	*	4	*	*	*	- *	*
Chesterfiel d General Hospital	*	4	*	*	*	- *	*
Clarendon Memorial Hospital	0	31	0.4	0.00	0.00	- 9.09	Not Different
Kershaw County Medical Center	0	47	0.6	0.00	0.00	- 6.59	Not Different

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				Hospital SIR = Observed “Expected”	95% Confidence Interval (CI)		Statistical Interpretation [†]
					Lower	Upper	
Regional Medical Center Of Orangebur g/Calhoun Counties	4	77	0.9	4.61	1.26 - 11.81	Higher	
Springs Memorial Hospital	0	34	0.4	0.00	0.00 - 10.41	Not Different	
Tuomey	0	154	1.7	0.00	0.00 - 2.20	Not Different	

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Surgical Site Infection (SSI) – Standardized Infection Ratio (SIR)
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Procedure: Knee Prosthesis (Replacement)

Region: Coastal (Georgetown, Horry, Williamsburg, Charleston, Dorchester, Berkeley, Jasper, Hampton, Colleton, Beaufort)

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Hospital	Observed No. Of SSI	No. Of Procedures*	Statistically “Expected” No. of SSI [†]	Comparison to Standard Population SIR = 1 (Observed = “Expected”)			
				Hospital SIR = <u>Observed</u> “Expected”	95% Confidence Interval (CI)		Statistical Interpretation [†]
					Lower	Upper	
Beaufort Memorial Hospital	3	317	3.1	0.96	0.20	- 2.82	Not Different
Bon Secours - St. Francis Xavier Hospital	*	3	0.0	*	*	- *	*
Coastal Carolina Medical Center	*	1	0.0	*	*	- *	*
Colleton Medical Center	0	38	0.4	0.00	0.00	- 10.31	Not Different
Conway Medical Center	0	106	1.1	0.00	0.00	- 3.23	Not Different
East Cooper Regional Medical Center	0	18	0.2	0.00	0.00	- 18.63	Not Different
Georgetow n Memorial Hospital	1	148	1.6	0.61	0.02	- 3.41	Not Different

Hospital	Observed No. Of SSI	No. Of Procedures [*]	Statistically “Expected” No. of SSI [‡]	Comparison to Standard Population SIR = 1 (Observed = “Expected”)			
				Hospital SIR = <u>Observed</u> “Expected”	95% Confidence Interval (CI)		Statistical Interpretation [†]
					Lower	Upper	
Grand Strand Regional Medical Center	3	279	3.0	1.01	0.21 -	2.96	Not Different
Hampton Regional Medical Center	0	8	0.1	0.00	0.00 -	48.29	Not Different
Hilton Head Regional Medical Center	0	45	0.5	0.00	0.00 -	8.15	Not Different
Loris Healthcare System	0	34	0.5	0.00	0.00 -	7.76	Not Different
MUSC Medical Center	3	273	2.7	1.10	0.23 -	3.22	Not Different
Roper Hospital Inc.	6	709	6.3	0.95	0.35 -	2.06	Not Different
Summervil le Medical Center	1	132	1.4	0.69	0.02 -	3.85	Not Different
Trident Medical Center	0	207	2.2	0.00	0.00 -	1.70	Not Different
Waccama w Communit y Hospital	0	172	2.2	0.00	0.00 -	1.66	Not Different

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